UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,152	06/08/2005	Marie-Catherine Fritsch	2002P18325WOUS	3257

7590 02/06/2007	EXAMINER
Siemens Corporatio	
Intellectual Property Department	SINGH, HIRDEPAL
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ART UNIT	PAPER NUMBER
2109	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
10/538,152</td><td>Applicant(s)
FRITSCH ET AL.</td></tr>
<tr><td>Examiner
Hirdepal Singh</td><td>Art Unit
2109</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 June 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>13-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>13-32</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>08 June 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>6/8/2005</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This action is in response to the Preliminary amendment filed on June 8, 2005.

The Preliminary amendment cancelled the claims 1-12 and added new claims

13-32. Thus claims 13-32 are pending and have been considered below.

Specification

2.   The disclosure is objected to because of the following informalities: the

examiner notes the use of acronyms (CAD, CAE etc.) throughout the

specification without first including a description in plain text, as required.

Appropriate correction is required.

3.   The disclosure is objected to because of the following informalities: on

page 5, paragraph 0014, line2 it reads as ".... that fourth means are provided..."

it seems like a typo error, examiner suggests to take the word "fourth" out.

Appropriate correction is required.

Double Patenting

4.   Applicant is advised that should claim13 be found allowable, claim 32 will

be objected to under 37 CFR 1.75 as being a substantial duplicate thereof.

When two claims in an application are duplicates or else are so close in content

that they both cover the same thing, despite a slight difference in wording, it is

proper after allowing one claim to object to the other as being a substantial

duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 13,17, 26, 29, and 32 are rejected under 35 U.S.C. 102(b) as

being anticipated by Burgess (US 5,805,896).

Claims 13, 26, and 32: Burgess discloses a system and method for producing

software/code using links of the components of the system (summary of the

invention).

      a. components having input and output ports are represented by

corresponding symbols/functional blocks/modules (colmn 1, lines 45-64; colmn 2,

lines65-67; colmn 3, lines 1-19);

      b. components are connected through their ports, direction of the

connection is indicated between input and output ports (colmn 3, lines 29-34,

lines 54-57; colmn 4, lines 1-16);

c. sending messages between the components through the ports and the

data is being transferred between the components (colmn 2, lines 23-30),

therefore it is inherent that the message transfer is taking place as signals

through the ports;

d. the event object includes message information describing the message

and a dispatching member (colmn 2, lines 28-41), and a component may send

messages corresponding to different events (colmn 3, lines 58-66), the

information included in the messages can be referred to as metainformation;

e. producing a program code by interconnecting the signals based on the

directed connections of the components (colmn 4, lines 35-50; producing a class

is referred to as a program code).

Claims 17, and 29: <u>Burgess</u> discloses a system and method for producing code

using links of the components of the system as in claims 13, and 26 above, and

further discloses input device/means for inputting relevant information for

producing software code (colmn 14, lines12-18; fig 9).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 14, 18, and 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Burgess (US 5,805,896) in view of Sakurai et al. (US

6,334,076).

Claims 14, and 27: Burgess discloses a system and method for producing a

software code as in claims 13, and 26 above, but doesn't explicitly disclose that

the code generation is for a manufacturing and/or processing plants. Sakurai

discloses a similar system and method for automatically generating a control

program/code for plants such as rolling plants, power plants, and chemical plants

(abstract, technical field). Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to use the disclosed

system for code generation in Burgess in a manufacturing and/or processing

plant. One would have been motivated to generate automation code for

controlling a manufacturing and/or process plant to allow a person with no

programming knowledge to generate the code, and to make system capable of

checking and modifying the function of automatically generated code.

Claim 18: Burgess and Sakurai disclose a system and method for producing a

software code as in claim 14 above, and Burgess further discloses input

device/means for inputting relevant information in the system for producing the

software code (colmn 14, lines12-18; fig 9).

9.   Claims 15, and 28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over <u>Burgess</u> (US 5,805,896) in view of <u>Elmqvist</u> ("A Uniform

Architecture for distributed automation", Advances in Instrumentation and

Control, Instrument Society of America, Research Triangle Park, NC US, Vol. 46,

No. part 2, 1991 Pages, 1599-1608).

Claims 15, and 28: <u>Burgess</u> discloses a system and method for producing a

software code as in claims 13, and 26 above, and further discloses that the

components can be displayed, moved, and connected using the graphical editor

(colmn 10, lines 37-49), but doesn't explicitly disclose that the a drawing having

control relevant information is used for code generation. <u>Elmqvist</u> discloses a

similar system for distributed automation with a graphical programming

environment for programming/software generation by graphically connecting the

predefined modules (abstract, page 1599; paragraph 4, page 1600). Therefore, it

would have been obvious to one having ordinary skill in the art at the time the

invention was made to use a drawing having control relevant information as

description for code generation in <u>Burgess</u>. One would have been motivated to

combine the graphically represented components i.e. a drawing of <u>Elmqvist</u> for

code generation to help make use of the standard designing tools.

10.   Claims 16, 19-25, 30, and 31 rejected under 35 U.S.C. 103(a) as being

unpatentable over <u>Burgess</u> (US 5,805,896) in view of <u>Sakurai et al.</u> (US

6,334,076) in further view of Elmqvist ("A Uniform Architecture for distributed

automation", Advances in Instrumentation and Control, Instrument Society of

America, Research Triangle Park, NC US, Vol. 46, No. part 2, 1991, Pages

1599-1608).

Claim 16: Burgess and Sakurai disclose a system and method for producing a

software code as in claim 14 above, but do not explicitly disclose that a drawing

having control relevant information is used for code generation. Elmqvist

discloses a similar system and method for distributed automation with a graphical

programming environment for programming/software generation by graphically

connecting the predefined modules (abstract, page 1599; paragraph 4, page

1600). Therefore, it would have been obvious to one having ordinary skill in the

art at the time the invention was made to use a drawing having control relevant

information as description for code generation in Burgess. One would have been

motivated to combine the graphically represented components i.e. a drawing of

Elmqvist for code generation to help make use of the standard designing tools.

Claims 19-22, and 30: Burgess and Sakurai disclose a system and method for

producing a software code for a manufacturing and/or processing plant as in

claims13-15, 17, and 26 above, but do not explicitly disclose that the material

flow, and/or energy flow, and/or information flow is provided as a basis for

mapping the directed relationships between the components. Elmqvist discloses

a similar system and method for distributed automation with graphical connection

represent information flow, and a data flow model (page 1601, paragraph 4; page 1605, paragraph 10). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the material flow, and/or energy flow, and/or information flow as a basis for mapping the directed relationships between the components in Burgess. One would have been motivated to use the material flow, and/or energy flow, and/or information flow as a basis for mapping the directed relationships between the components to make the automation code more effective and error free as the manufacturing and/or processing plant layout and planning is according to the material flow, and/or energy flow, and/or information flow.

Claims 23-25, and 31: Burgess and Sakurai disclose a system and method for producing a software code as in claims13-15, and 26 above, but do not explicitly disclose that the automation code is provide for central and/or distributed systems. Elmqvist discloses a similar system and method for distributed automation with automated cooperation for distributed objects (page 1599, abstract paragraph 2; page 1605, paragraph 5), but doesn't explicitly disclose that the system could be a central system. However, official notice is taken that it is old and well known within the computer art that if automated code generation is used for distributed system then it could be used for central system too. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the disclosed system in Burgess for central and/or distributed solutions. One would have been motivated to use the

disclosed system for central and/or distributed solutions to control the distributed

components with a central controller or to control the components with a central

controller as required.

Conclusion

11.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

a. Merat et al. (US 5,465,221) discloses a system and method for generating a

feature based inspection plan.

b. Walacavage et al. (US 6,442,441) discloses a method and system for

automatically generating programmable logic controller code.

c. Cheng et al. (US 2002/0010908) discloses a system and method for automatic

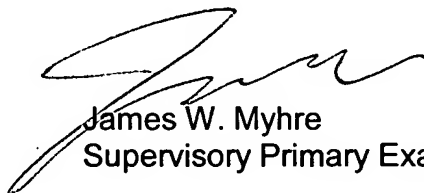software code generation.

        Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Hirdepal Singh whose telephone number is

571-270-1688. The examiner can normally be reached on Mon-Fri (Alternate

Friday Off)8:00AM-5:00PMEST.

        If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, James Myhre can be reached on 703-270-1065. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from
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free). If you would like assistance from a USPTO Customer Service
Representative or access to the automated information system, call 800-786-
9199 (IN USA OR CANADA) or 571-272-1000.

HS
1/31/07

James W. Myhre
Supervisory Primary Examiner